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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/571,291

11/28/2006

Pascale Gaillard

GAILLARD2

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BROWDY AND NEIMARK, P.L.L.C.
624 NINTH STREET, NW
SUITE 300
WASHINGTON, DC 20001-5303

EXAMINER

BALASUBRAMANIAN, VENKATARAMAN

ART UNIT

PAPER NUMBER

1624

MAIL DATE

DELIVERY MODE

03/17/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/571,291	Applicant(s) GAILLARD ET AL.	
	Examiner /Venkataraman Balasubramanian/	Art Unit 1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' response filed on 11/19/2009 is made of record. Claims 1-20 are pending. In view of applicants' response, the following rejections made in the previous office action are maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halazy et al., WO 01/47920 in view of Bennett et al., Current Opinion in Pharmacology 2003, 3:420–425 for reasons of record. To repeat:

Halazy et al., teaches several benzazole compounds useful for treating disorder of immune system cancer, which include instant compounds. See page 9, formula I and note definition of the X, G, L, R¹, and R². Note when X is S, G= pyrimidinyl with L substituents, with given definition of other variable choices, the compounds taught by Halazy et al., include instant compounds. See pages 9-24 for details of the preferred embodiments, species and process of making these compounds. See entire document. Particularly, see pages 28-54, for examples of compounds made. Although Halazy et al. teaches several benzothiazole compounds, Halazy et al., does not exemplify all the compounds of genus of compound of formula I shown in page 9, wherein X=S. But Halazy et al., teaches equivalency of alternate choices of all variables including X, with the compounds taught in pages 9-55 with those generically claimed in page 9.

Currently amended claims 1-10,13 and 15-20 related to method of use different from those taught by Halazy et al. However, Halazy et al., teaches such benzothiazoles are useful in inhibiting JNKs and JNKs are known at the time of instant invention to be implicated in metabolic disorder mediated by insulin resistance or hyperglycemia such as diabetes type II, inadequate glucose tolerance and obesity.

For example, Bennett et al., teaches JNK inhibitors to be useful in treating

insulin resistance, diabetes and obesity.

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made based on to combined the teaching of Halazy and Bennett to make various compounds of formula I as permitted by the reference using teachings of Halazy , and expect resulting compounds to possess the uses taught by the combined art in view of the equivalency teaching outline above.

This rejection is same as made in the previous office action. Applicants' traversal to overcome this rejection is not persuasive. First of all, the compounds taught by Halazy are same as that of instant claims. Instant specification on page 2 clearly acknowledges this. The compounds of Halazy are JNK inhibitors. Thus, administering the genus of compounds Halazy that is instant genus of compounds would inhibit JNK. Whatever negative attributes applicants offer for method of use of compounds of Halazy would be equally applicable to instant compounds.

Bennett et al., clearly teaches JNK inhibitors to be useful in treating insulin resistance, diabetes and obesity as seen pages 420-422. Instant claims recite the same. Applicants argued, pointing page that while instant compounds decreases insulin and glucose, Bennett did teaches lowering of plasma glucose but not plasma insulin. This is not correct. Contrary to applicants' urging, the Figure 2 shown in page 422 of Bennett clearly shows lowering of plasma glucose and insulin. And it is also improper comparison as applicants have measured plasma glucose level and plasma insulin level after 4 hr as pointed by applicants(see page 29, lines 18-21).

Thrust of applicants' argument is that Bennett's compound increase insulin level,

based on the data 20 ng to 30 ng during first 15 minutes of administration, while instant compounds decrease insulin level. However, as seen in Figure 2, Bennett teaches decrease in insulin level at 120 minutes. Applicants have not shown that instant compound does not raise initial insulin level before decreasing. Applicants' measurement of insulin level appears to be at 4hrs after administration of the instant compound.

Contrary to applicants' urging pointing column 1 of page 422, Bennett in this column clearly teaches usefulness of JNK inhibitors in treating insulin resistance and obesity as reproduced below:

"We have studied the performance of a small molecule JNK inhibitor (Celgene Corporation; CC105) in the lep- tin-receptor-deficient model of diabetes and obesity, the db/db mouse. This strain exhibits an early-phase hyper- insulinemia followed by progressive pancreatic failure and hypoinsulinemia from about six weeks of age. This leads to increased blood glucose and obesity. After 17 days of oral dosing with the JNK inhibitor, we observed significantly lower blood glucose and higher insulin levels (Figure 2). After oral glucose loading, we observed increased plasma insulin and improved glucose control in animals treated with the JNK inhibitor (Figure 2). Ex vivo analysis of pancreatic islet cells showed marked improvements in acinar recovery and morphology, as well as insulin release following high glucose stimulation (Figure 3). This preliminary pharmacological data shows striking parallels to the observations made using Jnk1-I-ob/ob mice. Further studies in appropriate models should define the potential of JNK inhibitors in treating insulin resistance and obesity".

Clearly, based on the significant lowering of blood sugar, one would expect JNK inhibitors to be useful for treating Type-II diabetes and obesity. The entire document, and especially the concluding paragraph clearly lends support for JNK inhibitors to treat diabetes, insulin resistance and obesity. It is held that, although there is no reason to doubt the compounds of Halazy were not useful for treating insulin resistance, even if they were not useful for treating insulin resistance, the compounds of Halazy would be useful for treating diabetes and obesity.

It should also be noted that applicants' argument that instant compounds lower insulin and hence useful for treating metabolic disorders claimed therein is also not persuasive for another reason. Method of use claims 9 and 10 clearly recites use of additional insulin selected from group consisting of a rapid acting insulin, an intermediate acting insulin, a long acting insulin, a combination of intermediate and rapid acting insulins. Thus, applicants first argues that Bennett's compounds raise insulin levels while instant compounds do not and then for the actual method of use applicants states additional insulin is needed to be effectively treat claimed metabolic disorders. This is clearly contradictory to applicants' criticisms of Bennett. Hence, it appears that the decreasing insulin level appears to be not critical.

For reasons stated above this rejection is proper and is maintained.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaillard et al., WO 03/091249 in view of Bennett et al., Current Opinion in Pharmacology 2003, 3:420-425.

Gaillard et al., teaches several benzothiazole compounds useful for treating

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Although Gaillard et al. teaches several benzothiazole compounds, Gaillard et al., does not exemplify all the compounds of genus of compound of formula A shown in page 3, wherein X=S. But Gaillard et al., teaches equivalency of alternate choices of all variables with the compounds taught in pages 20-29 with those generically claimed in page 3. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to make various compounds of formula A as permitted by the reference using teachings of Gaillard et al., and expect resulting compounds to possess the uses taught by the art in view of the equivalency teaching outline above.

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Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication from the examiner should be addressed to Venkataraman Balasubramanian (Bala) whose telephone number is (571) 272-0662. The examiner can normally be reached on Monday through Thursday from 8.00 AM to 6.00 PM. The Supervisory Patent Examiner (SPE) of the art unit 1624 is James O. Wilson, whose telephone number is (571) 272-0661. The fax phone number for the organization where this application or proceeding is assigned (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAG. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-2 17-9197 (toll-free).

/Venkataraman Balasubramanian/

Primary Examiner, Art Unit 1624